

C**?**.



ISH & RICHARDSON

225 FRANKLIN STREET

FISH RICHARDSON & NEAVE BOSTON (1916-1969)

BOSTON, MASSACHUSETTS 02110 · 2804

WASHINGTON, D.C. OFFICE: 60I THIRTEENTH STREET, N.W. WASHINGTON, D.C. 20005 202/783-5070

FREDERICK P. FISH (1855-1930) W.K. RICHARDSON (1859-1951)

TELEPHONE 617/542-5070 TELECOPIER: 617/542-8906 CABLE: FISHRICH, BOSTON TELEX: 200154

HOUSTON OFFICE: ONE RIVERWAY, SUITE 1200 HOUSTON, TEXAS 77056 713/629-5070

APPROVED AS INDICATED

SEP 15 1993

FOR THE COMMISSIONER OF

Commissioner of Pa

Sir

July 20, 1992

Patents & Trademarks

20231

CERTIFICATE OF CORRECTION BR.

JUL 3 1 1992

PATENT & TRADEMARK OFFICE

RECEIVED

TRANSMITTAL OF CERTIFICATE OF CORRECTION REQUEST

Certificate of Correction Request

Patent No.:

5,124,,316 June 23, 1992

For

A METHOD FOR PERIODONTAL REGENERATION

Applicants hereby request that a certificate of correction be issued for the above patent in accordance with the attached request.

Please apply any charges that are required to our Deposit Account No. 06-1050.

Respectfully submitted,

Date: July 20, 1992

Paul T. Clark Req. No. 30,162

Fish & Richardson 225 Franklin Street Boston, MA 02110-2804

Telephone: 617/542-5070 Facsimile: 617/542-8906

LTRSACWM. BOS

DS20063 08/13/93 5124316

Printer's Trim Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

'It is certified that error appears in the above-identified patent and that said Letters

Patent'are hereby corrected as shown below: Title Page, item 547 and cal 1, line 1,

Please, correct the title to read as follows: "A METHOD FOR PERIODONTAL REGENERATION";

Cos 1

On the face of the patent, under "REFERENCES CITED, U.S. PATENT DOCUMENTS", insert the following:

4,479,896 Antoniades
4,742,003 Derynck et al.
4,604,234 Fujii et al.
4,350,687 Lipton et al.
4,702,908 Thorbecke et al.
4,745,179 Ueda et al.
4,085,204 Wacker et al.
4,394,370 Jefferies

4,394,370 Jefferie 4,294,753 Urist

4,627,982 Seyedin et al.

4,652,441 Okada et al.

On the face of the patent under "REFERENCES CITED, FOREIGN PATENT DOCUMENTS, insert the following:

0267015 European Patent Appln. ally

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Betsholtz et al., "Growth Factor-Induced Proliferation of Human Fibroblasts in Serum-Free Culture Depends on Cell Density and Extracellular Calcium Concentration", J. of Cellular Physio., 118:203-210 (1984);

CONTINUED ON NEXT PAGE

MAILING ADDRESS OF SENDER:

Paul T. Clark, Esq.

Fish & Richardson 225 Franklin Street Boston, MA 02110-2804 PATENT NO. 5, 124, 316

No. of add'l copies

@ 50¢ per page

SUBSTITUTE FORM PTO76-22

No

No

dif

Printer's Trim Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

CONTINUED

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Canalis, "Effect of Platelet-Derived Growth Factor on DNA and Protein Synthesis in Cultured Rat Calvaria", Metabolism, 30:970-975 (1981);

Clemmons et al., "Somatomedin-C and Platelet-Derived Growth Factor Stimulate Human Fibroblast Replication", J. of Cellular Physio., 106:361-367 (1981);

Grotendorst, "Can Collagen Metabolism Be Controlled?", J. of Trauma 24:549-552 (1984);

Grotendorst et al., "Molecular Mediators of Tissue Repair", in Soft and Hard Tissue Repair, Hunt et al. eds., Praeger Scientific, 1984, pp. 20-40;

Grotendorst et al., "Stimulation of Granulation Tissue Formation by Platelet-Derived Growth Factor in Norman and Diabetic Rats", J.Clin.Invest. 76:2323-2329 (1985);

Hebda, "The Effects of Peptide Growth Factors on Epidermal Outgrowth in an in vitro Wound Healing Model", J. of Cell Biology, 107: p.46A (1989)

Heldin et al., "Growth of Normal Human Glial Cells in a Defined Medium Containing Platelet-Derived Growth Factor", Proc. Natl. Acad. Sci. USA, 77:6611-6615 (1980); CONTINUED

MAILING ADDRESS OF SENDER:

PATENT NO. 5, 124, 316

No. of add'l copies @ 50¢ per page

Printer's Trim Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

CONTINUED

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Kabigen Commercial Literature, "Human Cell Growth Factors for Cell Growth and Differentiation";

Lawrence et al., "The Reversal of an Adriamycin Induced Healing Impairment with Chemoattractants and Growth Factors", Ann. Surg., 203: 142-147 (1986);

Leal et al., "Evidence That the v-sis Gene Product Transforms by Interaction with the Receptor for Platelet-Derived Growth Factor", Science, 230:327-330 (1985);

Leitzel et al., "Growth Factors and Wound Healing in the Hamster", J.Dermatol.Surg.Oncol., 11:617-621 (1985);

Lynch et al., "Role of Platelet-Derived Growth Factor in Wound Healing: Synergistic Effects with Other Growth Factors", Proc. Natl. Acad. Sci. USA, 84: 7696-7700 (1987);

Michaeli et al., "The Role of Platelets in Wound Healing: Demonstration of Angiogenic Activity", Soft and Hard Tissue Repair, Hunt et al., eds., Praeger Scientific, 1984, pp. 380-394;

CONTINUED

MAILING ADDRESS OF SENDER:

PATENT NO. 5, 124, 316

No. of add'l copies @ 50¢ per page

Printer's Trim Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

CONTINUED

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Mustoe et al., "Accelerated Healing of Incisional Wounds in Rats Induced by Transforming Growth Factor-B", Science, 237:1333-1336 (1987);

Roberts et al., "Type B Transforming Growth FActor: A Bifunctional Regulator of Cellular Growth", Proc. Natl. Acad. Sci. USA, 82:119-123 (1985);

Reddan et al., "Insulin-Like Growth Factors, IGF-I, IGF-2 and Somatomedin C Trigger Cell Proliferation in Mammalian Epithelial Cells Cultured in a Serum-Free Medium", Exp. Cell Res., 142: 293-300 (1982);

Rinderknecht et al., "Primary Structure of Human Insulin-Like Growth Factor II", Proc. Natl. Acad. Sci. USA, 89: 283-286 (1978);

Ross et al., "The Biology of Platelet-Derived Growth Factor", Cell, 46: 155-169 (1986);

Schultz et al., "Epithelial Wound Healing Enhanced by Transform Growth Factor", Chemical Abstracts, 106:96915h (1987);

CONTINUED

MAILING ADDRESS OF SENDER:

PATENT NO. 5,124,316

No. of add'l copies

Printer's Trīm ·Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

CONTINUED

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Shipley et al., "Reversible Inhibition of Normal Human Prokeratinocyte by Type B Transforming Growth Factor-Growth Inhibitor in Serum-Free Medium", Cancer Research, 46:2068-2071 (1986);

Sporn et al., "Polypeptide Transforming Growth Factors Isolated from Bovine Sources and Used for Wound Healing in vivo", Science, 219: 1329-1331 (1983);

Sporn et al., "Repair of Tissue in Animal", USSN 468,590, date Filed 2/22/83;

Stiles et al., "Dual Control of Cell Growth by Somatomedins and Platelets Derived Growth Factor", Proc. Natl. Acad. Sci. USA, 76: 1279-1283 (1979);

Tashjian et al., "Platelet-Derived Growth Factor Stimulates Bone Resorption via a Prostaglandin-Mediated Mechanism", Endocrinology, 111:118-124 (1982);

Van Wyk et al., "Role of Somatomedin in Cellular Proliferation in The Biology of Normal Human Growth", edited by M. Ritzen et al., Raven Press, pp. 223-239 (1981);

CONTINUED

MAILING ADDRESS OF SENDER:

PATENT NO. 5, 124, 316

No. of add'l copies @ 50¢ per page

Printer's Trim Line →

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 5,124,316

DATED : June 23, 1992

INVENTOR(S) : Harry N. Antoniades and Samuel E. Lynch

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

CONTINUED

On the face of the patent under "OTHER PUBLICATIONS", insert the following:

Grotendorst, The Journal of Trauma, 24: No. 9 Supplement S49-S52 (1984);

Canalis, Metabolism 30: 970-975 (1981);

Canalis, Clinical Orthopaedics and Related Research, 193: No. 193, pp. 246-263 (1985);

Howes, "Platelet-Derived Growth Factor Enhances Demineralized Bone Matrix-Induced Cartilage and Bone Formation", (1988), 42:34-38, Calcif Tissue Int.;

Column 1, line 26, change "heat-soluble protein" to --heat-stable protein--; \triangle

Column 2, line 11, correct the spelling of "cartilage"; $\overline{\mathcal{U}}$

Column 7, lines 11-12, delete the following: --for a 1 cm² area, but the upper limit is really one of--:

MAILING ADDRESS OF SENDER:

PATENT NO. 5, 124, 316

No. of add'l copies @ 50¢ per page